REMARKS

Upon entry of the foregoing amendments, claims 1-2, 6, and 8-9 are pending. Claims 4-5 and 7 have been cancelled without prejudice. Claims 1, 2 and 6 have been amended. Support for the amended claims is found in the specification at page 3, lines 12-14 and 20-21 and at page 5, lines 6-7. Claims 8-9 have been added. Support for new claims 8-9 is found in the specification at page 3, line 14 and at page 5, line 8.

Rejections Under 35 U.S.C.§112, Second Paragraph:

Claim 1 is rejected under 35 U.S.C. 112, second paragraph as being indefinite.

Claim 1 has been amended to recite a method of making an oligonucleotide array comprising oligonucleotide probes and porous polymer gel pads with increased pore size. Applicants respectfully request withdrawal of the rejection.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph as being indefinite. Claim 5 has been cancelled and thus the rejection is moot.

Rejection Under 35 U.S.C.§103(a):

Claims 1, 2 and 4-7 are rejected under 35 U.S.C. §103(a) as being unpatentable over Guschin or Khrapko or Chetverin in view of Funk and if necessary, further in view of Ruchel (1978) or Ruchel (1975) or Blank.

Guschin teaches methods of making an array on porous gels. The reference, however, does not disclose methods for increasing gel pore size.

Khrapko teaches methods of making an array on porous gels. Like Guschin, the reference does not disclose methods for increasing the pore sizes of gels.

Chetverin teaches a method for entrapping the components of an amplification system in a porous gel. Although the reference teaches methods of freeze-drying, this is for the purpose of removing components that interfere with enzymes and substrates of the amplification reaction (column 12, lines 53-60) and not for the purpose of increasing the pore size of gels.

Ruchel (1978) and Ruchel (1975) describe methods of freeze-drying to preserve the ultrastructure of polyacrylamide gels. However, there is no teaching or suggestion in the reference that freeze-drying can be used for the purpose of increasing the pore size of polyacrylamide gels.

Blank describes the use of freeze-dried organic gels as crystal growth media. However, there is no teaching or suggestion in the reference that increased pore size permits diffusion of target molecules into gels for detection by oligonucleotide probe.

In contrast to the teachings of the cited art, the present invention is directed to a method of making an oligonucleotide array comprising oligonucleotide probe and porous polymer gel pads having an increased pore size. Increased pore size permits diffusion of target molecules into porous polymer gel pads for detection by oligonucleotide probe.

To establish a prima facie case of obviousness the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) M.P.E.P. §2143.

None of the references, taken alone or in combination, disclose each of the claimed elements of the invention. There is no teaching in Guschin, Khrapko, Chetverin, Funk, Ruchel (1978), Ruchel (1975) or Blank of making oligonucleotide arrays or porous polymer gel pads with increased pore size. Therefore, the requirement of teaching or suggesting all the claims elements has not been met.

The Examiner is invited to contact the undersigned at (415) 781-1989 if any issues may be resolved in that manner.

Respectfully submitted,

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